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Takashi Chosa

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

TEJANO, DWIGHT ALEX C

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,212	Applicant(s) CHOSA ET AL.	
	Examiner Dwight Alex C. Tejano	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 21-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>16 Oct 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- **Group I, claim(s) 1 - 46**, drawn to an image apparatus that creates a key image that is representative of a group of images. This invention is drawn toward class 348, subclasses 231.99, 231.2, 231.3.
- **Group II, claim(s) 47 - 73**, drawn to an imaging apparatus that determines and retrieves images of similar content when a photo is taken. This invention is drawn toward class 348, subclasses 333.02, 333.05, 333.11.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, **they lack the same or corresponding special technical features for the following reasons:**

The inventions of Group I and II are related, but distinct inventions that are all drawn toward the user interface of a camera. The special technical feature of Group I is the determination/selection of a retrieval key image that is used to represent a pre-

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determined group of images, similar to a representative image of an online photo album.

On the other hand, the special technical feature of Group II is the determination and retrieval of images that are similar to one that is currently being taken; for example, finding all photos in memory taken at the beach when a new beach photo is taken, or, similarly, finding all photos of a specific face when a person is recognized.

These inventions have separate utility that do not correspond to one another as defined under PCT Rule 13.2. As such, an election between inventions is required.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- **Species I:** Figs. 1 – 11
- **Species II:** Figs. 12 – 17

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

- **Species I:** Claims 1 – 20
- **Species II:** Claims 21 – 46

The following claim(s) are generic: **none**.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, **the species lack the same or corresponding special technical features for the following reasons:**

The technical features of Species I and II are distinct in that one species involves the files structure upon which images are saved whereas the other involves the processing for marking/modifying images. More specifically:

- **Species I:** Defines various storage medium structures that separate and define a key image or a generic image.
- **Species II:** Defines retrieval/parallel processing subroutines for obtaining or modifying a key image.

During a telephone conversation with **Atty. Brian Klock** on **08 April 2009**, a **provisional election was made without traverse to prosecute the invention of Group I, Species I, claims 1 – 20**. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21 – 73 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

The drawings are objected to because “Input” is incorrectly spelled in element 37 on Figs. 1, 10, 11, and 12. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are

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not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The **use of the trademark “Compact Flash”** has been noted in this application. It **should be capitalized wherever it appears** and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claims 6, 7, 8, and 19 are objected to because of the following informalities:

- Claims 6 and 7: the word “imaged” in the phrase “imaged key image” should be removed.
- Claim 8: the word “the” in the phrase “the image retrieval” should be replaced with “an.”
- Claim 19: the phrase “the image specified” should be replaced with “the arbitrary image specified.”

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the image" in the fourth line of the claim. There is insufficient antecedent basis for this limitation in the claim. “The image” can refer to either “the generic image” or to “the key image” recited earlier in the claim. Because, realistically, *both* images would require to be stored, it is unclear to which image “the image” is referring.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 7 – 17, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima (US 2003/0174219 A1.)

Regarding **claim 1**, Iijima discloses an imaging apparatus with multiple modes and a retrieval system. To the instant application, Iijima discloses an imaging unit (camera, 1) that selectively images a generic image to be retrieved (“full image file,” [0029]) and a key image to be used as a retrieval key of the image retrieval (“reduced image file” or “favorite,” [0030.]) Additionally, Iijima discloses a storing unit (card interface, 13) that stores an image on a storage medium (memory card, 14.)

Regarding **claim 2**, Iijima discloses all of the limitations of claim 1, as previously delineated. Additionally, Iijima discloses that a shutter button is used in taking an image (SA1, [0052.]) {Note: This citation comes from the second embodiment disclosed by

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Iijima. However, by the inventor's admission [0049,] the structure and, therefore, function of the embodiments are the same, save for an additional mode of operation.}

Regarding **claim 4**, Iijima meets all of the limitations of claim 1, as discussed above. Furthermore, Iijima discloses a key image is imaged by performing imaging in a mode other than an imaging mode. Iijima discloses the reduced image files (key images) are registered in the favorite folder [0030] and further discloses that the favorites are tagged in a separate process from the standard capture mode ("other than an imaging mode") in Fig. 4.

Regarding **claim 5**, Iijima discloses an imaging unit that images a subject image (camera, 1) and a storing unit (card interface, 13) that stores the subject image on a storage medium (memory card, 14.) Additionally, Iijima discloses that a retrieval operation using a key image ("image with voice reproduction," S10) is started with the imaging of the key image (S9) [0041.]

Regarding **claim 7**, Iijima discloses the limitations of claim 5, as previously shown. Additionally, Iijima discloses a key image is imaged by performing imaging in a mode other than an imaging mode (see claim 4.) Moreover, Iijima discloses that a retrieval operation using the imaged key image is started with imaging of the key image as a trigger. The retrieval of the full image with voice (S10) can only occur after the key image is displayed (S9) which reads upon this limitation.

Regarding **claim 8**, Iijima discloses an imaging unit that images a subject image (camera, 1) and a storing unit (card interface, 13) that stores the subject image on a storage medium (memory card, 14), further disclosing that the generic image (“full image file”) and the key image (“reduced image file”) are stored on the same storage medium (Fig. 2, [0029].)

Regarding **claim 9**, Iijima meets all of claim 8 and further discloses that the storing area for generic images (14a) and the storing area for key images (14b) are separated (Fig. 2B.)

Regarding **claim 10**, Iijima meets all of claim 8 and further teaches that information different from file management information for the generic image is attached to the file management information for the key image. Specifically, Iijima discloses that the key image contains both data that correspond to the full image files and data that corresponds to pixels contributing to resolution improvement of the color LCD [0030.]

Regarding **claim 11**, Iijima meets all of claim 8 and further discusses that, during the storing process, the key image is stored only after compression or curtailment of imaged subject data is performed [0030.] Specifically, Iijima discloses that the key image (“reduced image file”) is compressed to QVGA dimensions and on the order of 20KB in size.

Regarding **claim 12**, Iijima discloses all of the limitations of claim 8 and further discloses that the key image is copied (separate folders of the same image, Fig. 2,) changed (reduced in size, [0030,]) and linked to the generic image ("correspond to the full image files," [0030.]

Regarding **claim 13**, Iijima discloses all of the limitations of claim 8. Additionally, because key image is copied, changed, or linked to the generic image (as shown in the rejection to claim 12), then the opposite must be true, as well: if image A is a copy of/change from/linked to image B, then image B must be a copy of/change from/linked to image A. As such, this reversal is inherently disclosed by Iijima.

Regarding **claim 14**, Iijima discloses an imaging unit that images a subject image (camera, 1) and a storing unit (card interface, 13) that stores the subject image on a storage medium (memory card, 14) and further discloses that any full image file can be a key image by simply registering the file in a favorite folder (S4.) As such, this practice reads upon the claimed limitation "a generic image to be retrieved... can also be used as a key image..."

Regarding **claim 15**, Iijima meets the limitations of claim 14 and discloses that special information (pixel information, [0030]) is attached to file management information for the image that is a generic image and is also used as a key image.

Regarding **claim 16**, Iijima meets the limitations of claim 8, as discussed above. Furthermore, Iijima teaches the image used as a key image can be imaged (displayed) directly (S9.)

Regarding **claim 17**, Iijima meets the limitations of claim 8 and further discloses that the imaging apparatus has a retrieval button other than a shutter button (S2, [SET] button.)

Regarding **claim 20**, Iijima discloses an imaging unit that images a subject image (camera, 1) and a storing unit (card interface, 13) that stores the subject image on a storage medium (memory card, 14.) Furthermore, Iijima discloses that the user designates an image specified as a key image or an image appearing from a retrieval result (S9, scrolling through photos) and presses a retrieval button ([SET]) to execute retrieval again with the designated image as a key image (Fig. 6) [0041.]

Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Parulski, et al. (US 2004/0201692 A1.)

Regarding **claim 18**, Parulski, et al. (hereafter, "Parulski") discloses a method for classifying digital images using a digital camera. Parulski divides images into groups (Fig. 14A) and then, similar to Iijima, Parulski allows a user to designate certain files as "favorites" to set those images as key images for the groups in which they fall.

More specifically to the present application, Parulski discloses an imaging unit that images a subject image (camera, 300) and a storing unit (memory card interface, 324) that stores the subject image on a storage medium (removable memory card, 330.)

Additionally, Parulski discloses that the imaging apparatus specifies and reads out an arbitrary image in the storage medium to thereby use as the key image. In this case, the key image is an image that is selected to represent a group of photos (folder.) As disclosed in Fig. 14A/B, the apparatus reads out a folder with the image(s) deemed as "favorite" become the key image. However, in the case where no "favorite" is tagged, an image is arbitrarily specified and read from the storage medium to be used as the key image for the group [0147.]

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Misawa (US 2002/0180873 A1.)

Regarding **claims 3 and 6**, Iijima meets the limitations of claim 1 and 5, respectively, as discussed previously. However, Iijima fails to disclose the imaging of a key image by pressing a shutter button and a retrieval button simultaneously to instigate

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a retrieval operation, as disclosed in the instant application. Despite this, the Examiner maintains that the use of simultaneous button presses to execute actions was well known in the art, as disclosed by Misawa.

Within the same digital camera art, Misawa discloses an imaging apparatus that includes a storing operation that is instigated by simultaneously pressing the menu, execute, and the shutter buttons [0044.] Misawa further discloses that this simultaneous pressing is required so that the user does not easily enter into the storing operation when storing is not desired.

Because the invention disclosed in Iijima is involved with storing, designating, and retrieving key images, it would be obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings Misawa and Iijima. Functionally, it would be fairly simple to map the “execute” and “shutter” buttons of Misawa to the “[SET]” and “shutter” buttons that are already present in Iijima.

More importantly, however, Misawa's multiple button press would require that user consciously designate a desired photo as a favorite (set as a key image) for later retrieval in Iijima's system, thereby preventing unnecessary space in the memory card from being taken up when such is not desired.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski.

Regarding **claim 19**, Parulski discloses the limitations of claim 18, as previously discussed. However, Parulski fails to explicitly disclose that the imaging apparatus

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stores the arbitrary image specified as the key image on the storage medium as a key image.

As previously mentioned, because no "favorite" image was used to be the key image for the folder, an arbitrary image was chosen to represent the group. Given that, it would be obvious to one of ordinary skill in the art that this arbitrary choice should remain constant until the user chooses a "favorite," so as to prevent confusion as to what photos are kept in the folder. If a key image continuously changes, thereby confusing the user, it would ultimately defeat the purpose of using a key image in this respect -- as a representative image for a group of photos.

Therefore, it would be an obvious and simple choice that, when an arbitrary photo is designated as the representative image, that photo is flagged and stored on the storage medium as a "key image," such that the same photo would be displayed when accessed later in order to prevent user confusion upon multiple accesses.

Citation of Pertinent Art

The prior art made of record is considered pertinent to the applicant's disclosure, but is not relied upon as a reference for the preceding sections:

- Tanaka, et al. (US 2001/0041056 A1) discloses an image information apparatus that includes the classification of images.
- Yamasaki, et al. (US 2003/0011683 A1) discloses a digital camera and file structure to classify images in folders with representative images.

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- Satomi, et al. (US 2003/0063304 A1) discloses an online photo storage website that includes photo information and file information.
- Okisu, et al. (US 2004/0263661 A1) discloses an image-taking apparatus with the ability to annotate images and flag certain photos as “parent.”
- Dalton (US 2005/0110878 A1) discloses a digital camera with a “favorites” folder and identifier.
- Yoda, et al. (US 2005/0254099 A1) discloses an imaging apparatus with a specific file structure and metadata associated with the images.
- Matsumoto, et al. (US 6,229,566 B1) discloses an electronic photography system with a photo album grouping section.
- Tretter, et al. (US 6,977,679 B2) discloses a camera file structure and metadata for content classification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwight Alex C. Tejano whose telephone number is (571) 270-7200. The examiner can normally be reached on Monday through Friday 10:00-6:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David L. Ometz/
Supervisory Patent Examiner, Art
Unit 2622

/Dwight Alex C Tezano/
Examiner, Art Unit 2622